REMARKS

In the Office Action dated June 1, 2005, claims 13, 23, 28-29, 31, 36, 38, 44, 46 and 49-59 are pending. Claims 13, 23, 28, 29, 31, 36, 38, 44, 46 and 49-56 are withdrawn from further consideration. Claims 57-59 are rejected.

This Response addresses each of the Examiner's rejections. Applicants therefore respectfully submit that the present application is in condition for allowance. Favorable consideration of all pending claims is therefore respectfully requested.

Claims 57-59 are rejected under the judicially created doctrine of obviousness-type double patenting, as allegedly unpatentable over claims 1-5 of U.S. Patent 6,642,359.

Applicants acknowledge that the rejection can be overcome by filing a terminal disclaimer. Applicants will submit an appropriate terminal disclaimer once the Examiner indicates otherwise allowable subject matter in the present application.

Claims 57-59 are also rejected under 35 U.S.C. §112, first paragraph, for allegedly lacking enabling support in the specification.

The Examiner admits that the specification is enabling for a peptide consisting of residues 137-151 of the S protein from strain WT DF2/WT WSU 1146 for differentiating FIPV from FECV. However, the Examiner contends that the specification does not reasonably provide enablement for peptides comprising residues 137-151 or peptides from other related viruses, or for methods of treatment or prophylaxis using any peptides.

Applicants question the Examiner's contention with respect to enablement for methods of treatment or prophylaxis using the claimed peptides. Applicants respectfully submit that the present claims are directed to proteins, not to methods of treatment or prophylaxis. The

specification discloses how to make and use the proteins, e.g., in raising antibodies or diagnostic assays. Applicants should not be required to provide a showing on how to use the claimed proteins in a method of treatment or prophylaxis.

Further, with respect to proteins other than the core peptide fragment of amino acids 137-151, Applicants respectfully submit that the Examiner has not responded to Applicants' previous submission that other peptides such as amino acids 94-223, which include the core peptide fragment of amino acids 137-151, are also shown to be useful in differentiating FIPV from FECV. In particular, Applicants direct the Examiner's attention to pages 77-79 of the specification. On pages 77-78 (Example 13), it is described that sera from cats immunized with FIPV strain WT WSU 1146 did not recognize a fusion protein representing amino acids 94-223 of FECV in a Western Blot. In addition, sera from cats infected with FECV did not recognize a fusion protein representing amino acids 94-223 of TS FIPV. However, sera from cats infected with FIPV strain WT WSU 1146 or WT DF2 did recognize such fusion protein representing amino acids 94-223 of TS FIPV. The specification states on page 78, lines 10-13, that specific sequences, such as amino acids 137-151, within the amino acid 94-223 fragment, are useful in differentiating FIPV from FECV. That the protein fragment containing amino acids 94-223 retains the antigenicity of amino acids 137-151 is further confirmed by the experiment described in Example 14 on page 79 of the specification.

Applicants respectfully submit that the peptide consisting of amino acids 137-151 is identified as a core antigenic motif of an S-protein that can differentiate FECV from FIPV. However, the instant disclosure clearly demonstrates, as discussed above, that other larger peptide fragments that contain amino acids 137-151 are antigenic as well. Moreover, it is believed that the sequences of the S-protein among different FECV and FIPV strains share

significant similarities. Therefore, Applicants submit that peptide fragments that contain amino acids 137-151 of an S protein from a strain other than WT DF2/WT WSU 1146, would be antigenic as well. Thus, Applicants should not be required to limit the claims to a particular viral strain.

Accordingly, it is respectfully submitted that based on the present teaching, those skilled in the art would be able to make and use the claimed proteins without undue experimentation. The rejection of claims 57-59 under 35 U.S.C. §112, first paragraph, is overcome. Withdrawal of the rejection is therefore respectfully requested.

In view of the foregoing amendments and remarks, it is firmly believed that the subject application is in condition for allowance, which action is earnestly solicited.

Respectfully submitted,

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